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PATENT *JPW*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent  
appln. of: Thomas Welsh et al.

Serial No.: 09/935,926

Filed: August 23, 2001

For: **LINEAR COMPRESSION  
LATCH**

Examiner: Thomas Y. Ho

Art Unit: 3677

Atty. Dkt.: 195-01

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

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*Alex Sluzas*

Alex R. Sluzas, Reg. No. 28,669  
Dated: May 20, 2004

TRANSMITTAL LETTER

Dear Sir:

Enclosed herewith please find the following documents for filing in the United States Patent and Trademark Office:

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2. Response;
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Respectfully submitted,

*Alex Sluzas*

Alex R. Sluzas, Esq.  
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May 20, 2004

Order No. 2286

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**RESPONSE**

Dear Sir:

This is in response to the Examiner's Action dated April 27, 2004 setting a three-month shortened statutory period for response. This response is being filed on May 20, 2004, within the shortened statutory period.

Claims 3, and 5-8 are pending in the present application.

Applicants gratefully note that in response to applicants' arguments submitted on February 13, 2004, the Examiner has withdrawn (a) the rejection of claims 3, 5, 6 and 8 previously entered under 35 U.S.C. 102(e) over U.S. Patent 6,362,975 ("Liu"), (b) the rejection of claim 7 previously entered under 35 U.S.C. 103(a) over Liu in view of U.S. Patent 5,039,143 ("Ramsauer"), as well as (c) the rejection previously entered under 35 U.S.C. 103(a) over Liu in view of U.S. Patent 5,201,557 ("Schlack").

Claims 3 and 5-8 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This rejection is respectfully traversed and reconsideration and withdrawal are respectfully requested.

The Examiner states that as to claim 8, the recited paths of travel for the pawl are a misdescription of applicants' invention. In particular, the Examiner points out that in claim 8, applicants recite "a pawl mounted for substantially linear motion" in line 5. The Examiner further states that the drawings clearly show that this is physically impossible. The Examiner observes that the pawl 140 has a pin 160 passing through a rear aperture 148, and a pin 150 passing through a front aperture 150. In addition, the Examiner states that the pin 160 passes through the slot 141 (in the carriage), and the pin 150 passes through the slot 139 (also in the carriage). The Examiner concludes that because the front and rear portions of the pawl 140 are limited to movement within these defined slots, there is no possible manner wherein the pawl 140 can move linearly. The Examiner observes, as an example, that, as the rear portion and pin 160 of the pawl 140 moves across the horizontal slot 341, the front portion and pin 150 of the pawl 140 rides up/down the sloped slot 339. The Examiner concludes that this difference between the rise of the front and rear portions of the pawl allows the pawl to move rotationally and never linearly. The Examiner further notes that applicants then recite in the last two lines of claim 8 that "the pawl is mounted to travel in a second path in a direction substantially perpendicular to the first path between the intermediate position and the closed position." The Examiner asserts that this is also physically impossible. The Examiner argues that the front of the pawl can only travel in a sloped path defined by slot 139. The Examiner also argues that even if the pin 160 travels through the perpendicular paths of slot 141, the entire pawl cannot mimic the motion of pin 160 because the front and rear portions of the pawl travel very different paths. The Examiner states that for purposes of examination, it will be assumed that applicants intend to

convey that a portion of the pawl follows the claimed series of motions, and not the entire pawl as claimed. The Examiner correctly observes that claims 3 and 5-7 depend from claim 8. The Examiner then states that as to claim 6, the recited carriage mounted for linear motion within the housing is also a misdescription. The Examiner states that the carriage 130 is held in place by the housing 20. The Examiner states that for purposes of examination, it will be assumed that applicants intend to convey that the carriage provides linear motion to a portion of the pawl by restricting movement in an L-shaped slot. The Examiner concludes that appropriate correction of the indefinite claim language is required.

The Examiner's rejection is improper, and based on (a) an erroneous fundamental assumption as well as (b) a misreading of the claim language.

As stated in the specification, the drawings merely illustrate a preferred embodiment of applicants' invention; they do not illustrate the invention per se. It is the function of the claims and not the specification to define the right to exclude. Markman v. Westview Instruments, Inc., 52 F.3d 967, 980 (Fed. Cir. 1995) (en banc), aff'd, 517 U.S. 370 (1996). Applicants' invention is defined by the claims. It is improper to attempt to limit applicants' claimed subject matter by importing limitations characterizing specific embodiments of the invention. Patent drawings are "not meant to represent 'the' invention or limit the scope of coverage defined by the words used in the claims themselves." Gart v. Logitech, Inc., 254 F.3d 1354 (Fed. Cir. 2001), cert. denied, 534 U.S. 1114 (2002). In addition, the Examiner has improperly ignored the word "substantially" in construing claim 8. The Examiner erects a straw man – a nonexistent claim that requires absolute linear motion - and then rejects that claim based on the inconsistency of that straw man with applicants' illustration of their preferred embodiment. Claim 8 is not indefinite – it clearly recites substantial linear motion – and the preferred embodiment gives an example of a physical latch meeting the limitations of that claim.

Further, the Examiner's statement that the difference between the rise of the front and rear portions of the pawl allows the pawl to move rotationally and never linearly is not correct. As the pawl 140 moves forward, the first and second pins 150, 160 move linearly within their respective slots 139, 141. The movement of the pawl 140 is substantially linear, as the second pin 160 moves forward horizontally within the first leg of the "L"-shaped slots 141, the geometry of this embodiment compels that the pawl 140 moves forward horizontally, with a very slight downward rotation of the forward end of the pawl 140 about the second pin 160. When the second pin moves upward in the second leg of the "L"-shaped slots 141, the pawl 140 also moves linearly upward, with a slight rotation of the forward end of the pawl 140 upward. Thus, the motion of the pawl 140 of this embodiment of the invention is "substantially" linear, meeting the limitations of independent claim 8.

The rejection is improper and should be withdrawn for these reasons. Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 3 and 5-8 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,984,382 ("Bourne"). This rejection is also respectfully traversed and reconsideration and withdrawal are respectfully requested.

The Examiner states that as to claim 8, Bourne discloses a linear compression latch comprising: a housing 15; a lever handle 34 rotatable by an operator between a first position (shown only in Figure 3) and a second position (shown only in Figure 4), the lever handle being mounted in the housing; a pawl (portion) 16, 22 mounted for substantially linear motion; the portion of the pawl mounted for substantially linear movement between Figures 3 and 4 is the portion 27), the pawl (portion) being actuated by rotation of the lever handle and traveling substantially linearly between an open position to a closed position as the lever handle is rotated between the first position to second position; wherein the pawl (portion) is mounted to travel between the open position along a first path (shorter segment of slot 33;

see Figure 3) and an intermediate position (the angle between the segments of slot 33); and wherein the pawl (portion) is mounted to travel in a second path (longer segment of slot 33; see Figure 4) in a direction substantially perpendicular to the first path between the intermediate position and the closed position. The Examiner further asserts that as to claim 3, Bourne discloses, wherein the first path is linear. The Examiner argues that as to claim 5, Bourne discloses, wherein the second path is linear. The Examiner also contends that as to claim 6, Bourne discloses, further comprising a carriage 32, the carriage being mounted for linear motion (of the pawl portion 27) within the housing, the pawl (portion) being mounted within the carriage. Finally, the Examiner asserts that as to claim 7, Bourne discloses, further comprising connection means 26 for rotatably connecting the lever handle and the pawl.

The Examiner's conclusions are incorrect and are based on a mistaken understanding of operation of Bourne's latch, and a mischaracterization of its structure.

Initially, applicants respectfully note that Bourne discloses an "extended reach latch" for an aircraft engine cowling, not a "linear compression latch," as the Examiner characterizes Bourne's latch. It should be noted that in the initial action on the merits of this case, the present Examiner's predecessor entered a rejection under 35 U.S.C. 103(a) over another patent directed to a mechanically complex latch intended for securing aircraft engine cowlings. This rejection was subsequently withdrawn by the Examiner in response to the arguments recited in applicants' appeal brief.

Bourne's extended reach latch is a type of "over-center" latch, and includes an elongated hook 16. The hook 16 is the "working" part of the extended reach latch, and functionally parallel to the pawl of applicants' presently claimed invention.

The action of Bourne's extended reach latch is shown in the sequence of Figures 2, 3 and 4 reproduced below:

FIG. 2

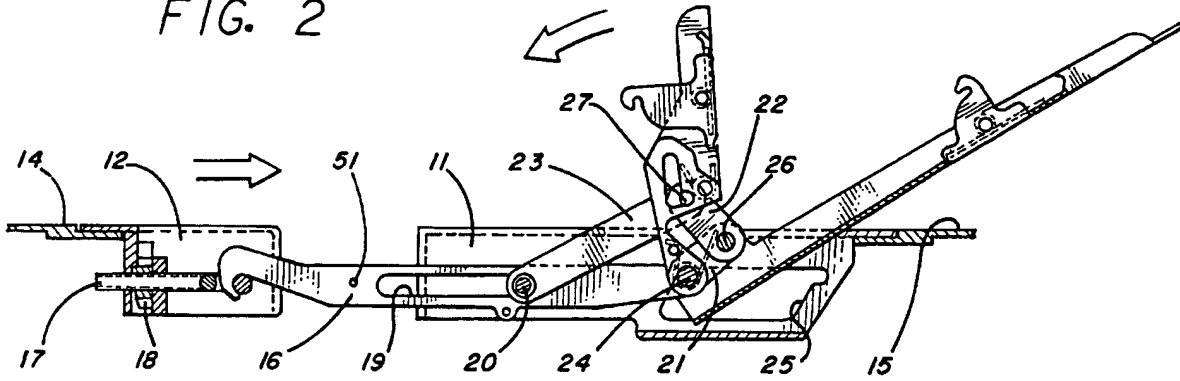
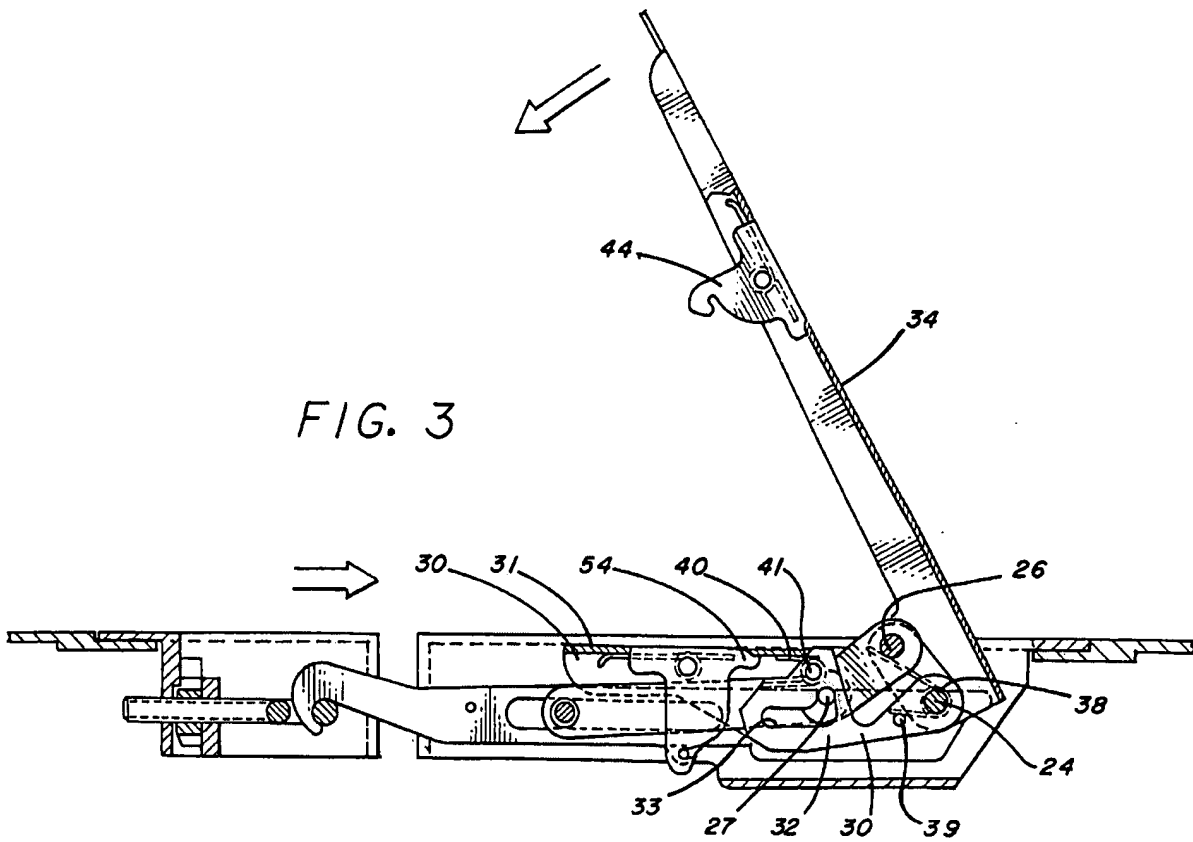
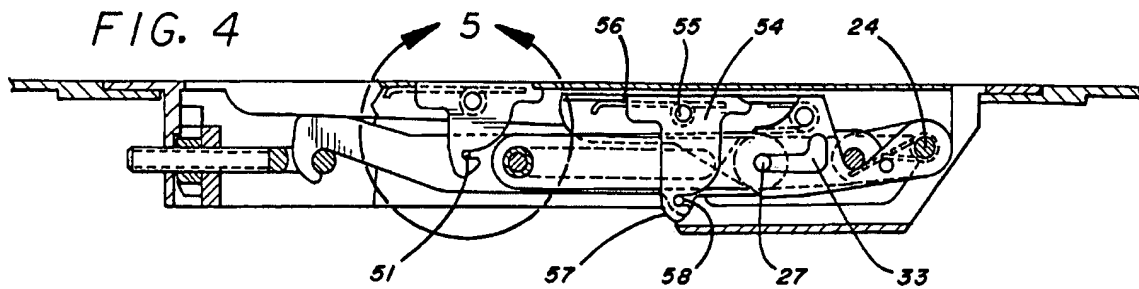


FIG. 3





The hook 16 is confined to move linearly: The hook 16 has an elongated hook slot 19 in the middle of the hook 16 through which passes a hook pin 20 riding in the slot 19 and fixed in the housing 11 (col. 3, lines 9-10). A first link pin 24 joins the hook 16 to a first link 21, and the first link pin 24 is confined to ride in a housing slot 25 (col. 3, lines 11-14). The hook pin 19 and the first link pin 24 and their associated slots 19, 25 confine the hook 16 to a substantially linear motion as the latch is opened or closed. This can be seen by comparing Figures 2, 3, and 4 which depict the latch being moved from a fully open position (Figure 2) through an intermediate position (Figure 3) to a fully closed position (Figure 4).

The mechanically complex motion of the extended reach is accomplished by interposing three links and an "inner handle" 30 between the hook 16 and the handle 34. As the handle 34 is closed, the handle 34 initially rotates around the second link pin 26, and both the hook 16 and the handle 34 are pushed back by force acting the second and third links 22, 23 against the fixed hook pin 20. At the intermediate position shown in Figure 3, the inner handle has been locked to the hook 16 by the inner trigger 54 (col. 3, lines 56-60).

As the handle 34 is moved from the intermediate position shown in Figure 3 to the fully closed position shown in Figure 4, the third link pin 27 moves in the slot 33 relative to the inner handle 30. Initially, the pin 27 rotates downwardly in the first "leg" of the slot 33 around the hook



pin 20. However, then the handle 34, hook 16 and inner handle are pushed to the right by force acting through the second and third links 22, 23 against the hook pin 20.

In making the rejection, the Examiner identifies the combination of the hook 16 and the second link 22 as a “pawl” and asserts that the third link pin 27 is the portion of this “pawl” that is mounted for substantially linear motion between Figures 3 and 4. The Examiner asserts that the third link pin 27 is mounted to travel between an open position and an intermediate position along a first path (the shorter segment of the slot 33) and then between the intermediate position and a closed position along a second path (the longer segment of the slot 33).

The Examiner’s description of the motion of the third link pin 27 is not correct.

Initially, the third link pin 27 rotates slightly around the hook pin 20 and descends down the short leg of the slot 33. However, after that initial motion, applicants respectfully contend that it is impossible for the third link pin 27 to move at all – it is mounted in one end of the third link 23, which is mounted on the hook pin 20 at the other end. What happens instead is that the hook 16 and the inner handle 30 that has been locked to the hook 16 by the inner trigger 54 move as a unit to the right relative to the fixed third link pin 27, as can be confirmed by reference to Figures 3 and 4. Thus, the limitations of applicants’ claim 8 are not completely met by the Bourne’s disclosure, applicants’ claimed invention is not anticipated by Bourne, and the rejection entered under 35 U.S.C. 102(a) should be withdrawn.

Even if the Examiner correctly described the motion of the third link pin in Bourne’s latch, the Examiner’s identification of a “pawl” with the third link pin is improper. Mechanically and functionally, the second and third links performing art-recognized roles that differ from the function of Bourne’s hook. The linkage comprised of the first, second and third links and associated pins form a system of levers through which force exerted by the operator on the handle is transmitted to the hook pin. The hook serves a different mechanical role – force

applied to the handle is transmitted through the hook to the keeper 15 to draw the keeper 15 and associated second member 14 towards the first member 13.

The second link is not even directly attached to the hook, but is rather attached indirectly through the first link at one end. The handle, which the Examiner chooses to label separately, is attached directly to the hook.

The Examiner has improperly attempted to reconstruct applicant's invention guided by the hindsight provided by applicants' own disclosure employing the process of picking and choosing functionally unrelated parts in a mechanically complex latch and labeling them as a single unit.

With respect to dependent claims 3, 5, 6 and 7, because Bourne does not identically meet the limitations of independent claim 8, Bourne cannot anticipate any of the claims which depend from claim 8, as each dependent claim incorporates all the limitations of independent claim 8.

Further, with respect to claim 6, the Examiner identifies the parallel arms 32 of the inner handle 30 as a carriage mounted for linear motion. However, contrary to the Examiner's identification, the inner handle 30 is pivotably mounted for rotational motion around the first link pin 24 (col. 3, lines 17-19). The Examiner parenthetically appears to contend that claim 6 requires the carriage to serve to provide linear motion of another part of the latch, namely the "pawl portion" or third link pin 27. This reading is contrary to express language of claim 6, which unambiguously states that the carriage itself is mounted for linear motion.

Finally, with respect to claim 8, the Examiner identifies the second link pin 26 as connection means for rotatably connecting the lever handle to the pawl. However, the second link pin 26 does not connect either the outer handle 34 or the inner handle 30 to the hook 16. As argued above, the third link pin 27 does not function as part of the "pawl" and the Examiner's labeling it as such is inaccurate and mistaken.

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Applicants respectfully request reconsideration and withdrawal of the rejection entered against the present claims under 35 U.S.C. 102(a) over Bourne for the reasons provided above.

The presently claimed invention is not rendered obvious over Bourne. Bourne describes a mechanically complex draw latch designed for a very specific purpose – securing aircraft cowlings. There is nothing in Bourne that would either motivate or suggest to one of ordinary skill in the art that Bourne's extended reach draw latch could or should be simplified and modified to provide an entirely different latch with a different function and action. Consequently, the presently claimed latch is not obvious over Bourne.

As the application is now believed to be in condition for allowance, early favorable action and an early notice of allowance are respectfully requested.

Respectfully submitted,

May 20, 2004



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